a3 conclude

17. (Once Amended) A formulation comprising a solid-state protein, a methoxysalicylaldehyde, and isopropanol.

a4

19. (Once Amended) A formulation according to claim 17 wherein said methoxysalicylaldehyde is 3-methoxysalicylaldehyde.

20. (Once Amended) A formulation according to claim 17 wherein said methoxysalicylaldehyde comprises at least about 0.1% by weight of said formulation, and said isopropanol comprises at least about 0.1% of said formulation.

21. (Once Amended) A formulation according to claim 17 wherein said methoxysalicylaldehyde comprises from about 2.9% to about 8.0% by weight of said formulation, and said isopropanol acid comprises from about 0.1% to about 4.0% of said formulation.

22. (Once Amended) A composition comprising a methoxysalicylaldehyde and 6-hydroxy-2,5,7,8-tetramethylchroman-2-carboxylic acid.

23. (Once Amended) A composition according to claim 22 wherein said methoxysalicylaldehyde is 3-methoxysalicylaldehyde.

Cancel claim 24.

REMARKS

The above amendments have been made to improve form by eliminating the word "derivative" from the claims. Attention is directed to the pages entitled "Version Marked Up To Show Changes Made" appended to this response, which pages indicate the exact nature of the amendments. It is believed the amendment overcomes the indefiniteness rejection made in the Office Action. Further explanation is provided below.

Claim 24 has been canceled to obviate the only other rejection under Section 112 made by the Examiner.

Claims 1, 3, 5, 7, 8, 10-13, 15-18, and 20-22 stand rejected under 35 USC §112, the Examiner having contended that the meaning of the term "derivative" is unclear on the basis that "derivative" is not clear as to what the degree of structural and/or functional similarity a compound must have with methoxysalicylaldehyde. In response, Applicants note that the

term was intended to embrace the positional isomers of methoxysalicylaldehyde, which are four in number. Salicylaldehyde is recognized in the art as being 2-hydroxybenzaldehyde (see, for example, an Aldrich catalog or Grant & Hackh's Chemical Dictionary, Fifth Edition, Published by McGraw-Hill, Inc.). Methoxysalicylaldehyde thus has 4 positional isomers, corresponding to the 4-carbons on the phenyl ring which are open to being occupied by methoxy. Applicants state in their specification that the isomer o-vanillin, 3-methoxysalicylaldehyde, is preferred.

To clarify that the invention covers the use of the above-described four isomers, the phrase "a methoxysalicylaldehyde derivative" has been changed to "a methoxysalicylaldehyde", which those skilled in the art would readily recognize as covering the positional isomers of methoxysalicylaldehyde. The amendment renders the claim clear as to the exact compounds within the claim scope. Claims 2, 4, 6, 9, 14, 19, and 23 claim a preferred methoxysalicylaldehyde, 3-methoxysalicylaldehyde. It is respectfully submitted that the amendment overcomes the rejection, and it is accordingly requested that the rejection be withdrawn.

Claim 24 stands rejected under 35 USC §112 for indefiniteness, the Examiner having stated that it is not clear what constitutes a "use". Applicants have now canceled the claim, thereby obviating the rejection. Withdrawal of the rejection is accordingly respectfully requested.

Various claims stand rejected under 35 USC §102(b)as being anticipated by five different references, as further identified and explained below. Before turning to each of the rejections, it would be useful to review the legal standard for an anticipation rejection. For an anticipation rejection to lie, a single reference must disclose each of the elements and/or limitations in a claim. If a reference does not disclose all elements and/or limitations of an applicant's claims, that reference can not be anticipatory. See, for example, Gechter v. Davidson, 43 USPQ2d 1030 (Fed. Cir. 1997):

> Under 35 USC §102, every limitation of a claim must identically appear in a single prior art reference for it to anticipate the claim. [43 USPQ2d at 1032].

All five of the anticipation rejections made by the Examiner are traversed on the basis that that they do not meet the legal standard as described above, i.e., there is at least one element missing from each reference, meaning that each reference is fatally defective to support an anticipation rejection. Applicants explain as follows:

Claims 7-10 stand rejected as anticipated by Tyle et al. (Tyle), US 5,977,068. Tyle discloses stabilized growth hormone compositions for parenteral administration

comprising any one of a number of preservatives, plus a growth hormone, "stabilized" being with respect to molds, fungi, and bacteria (column 1, lines 28-31). Tyle Table 1 discloses protein compositions containing preservatives such as the compounds o-vanillin and vanillin. Tyle does not disclose that his compositions contain a solid-state protein, however, and in fact discloses that his compositions are aqueous. Tyle clearly intends that his invention not encompass solid state proteins since he is interested in the ability to "...prevent fungal and/or bacterial growth in the physiological pH range required for these compositions..." (column 1, lines 64-66), indicating that his invention is limited to aqueous solutions (see Tyle Example 1), and that it does not include solid state proteins. Thus Tyle, disclosing solutions of proteins as opposed to solid state proteins, cannot anticipate Applicants because Tyle, per Gechter, does not disclose all elements of Applicants claimed invention.

Claims 7-11 stand rejected as anticipated by Clark et al., US 5,198,422. Clark does not disclose a composition comprising a solid state protein and a methoxy-salicylaldehyde, i.e., a mixture of discrete components that one skilled in the art would recognize as being unreacted. Rather, Clark discloses a composition comprising the reaction product of PST with an aldehyde such as o-vanillin. Thus Applicants compositions comprise a protein and a methoxysalicylaldehyde. Clark's compositions comprise the reaction and/or complexation product of vanillin with the protein, hence do not comprise a methoxysalicylaldehyde and a protein. Rather, his compositions comprise the reaction product of the two.

Claims 1 and 7 stand rejected over Carden, US 4,714,609. Carden does not disclose a method of protecting a solid state protein from ionizing radiation, as required by Applicants' claim 1. Note that ionizing radiation, as clearly defined by Applicants, is radiation of sufficient energy to ionize or dissociate molecules into free radicals or electrically charged species. Even allowing that the sun does produce ionizing radiation, it never reaches the earth, absorption of such short wavelength radiation being the purpose of the ozone layer. Also, the skin tanning process is not the result of ionization or free radical generation (i.e., that destroys a molecule), but rather results from the stimulation of melanocytes in the skin by UV rays to produce melanin, the pigment responsible for tanning. See "How Did You Get That Tan", at http://www.sun-wellness.com/articles/061howdid.html, copy attached hereto. Thus, the production of a suntan by the sun's radiation results from the production of a pigment by cells in the skin, not destruction from ionizing radiation. Carden discloses neither the element of ionizing radiation nor any element of protecting a solid state protein from that ionizing radiation, and

hence cannot anticipate claim 1.

As to Carden vis a vis claim 7, the same argument presented above for Clark applies with equal force to Carden. Carden does not disclose a composition comprising a methoxysalicylaldehyde and a solid state protein, but rather discloses a composition, intended to accelerate skin tanning, which functions by producing a reaction product between free amine groups in the skin and the aldehyde group of vanillin. Thus Carden cannot anticipate claim 7 since Carden discloses neither a composition comprising a methoxysalicylaldehyde and a solid state protein, nor protection from ionizing radiation.

Carden accordingly cannot anticipate either claim 1 or claim 7 since, per Gechter, it does not disclose all elements of these claims.

Claims 1, 7, 8, 10, and 11 stand rejected as anticipated by Peterson, US 5,730,933. Peterson discloses a composition and method for sterilizing biologically active compounds wherein the compound(s)plus an "extraneous protein" and a free radical scavenger are cooled in order to freeze and immobilize the protein before irradiating with gamma or electron-beam irradiation to sterilize. No methoxyslicylaldehyde, i.e., any isomer, is disclosed for use in the invention, as required by Applicants claims. In view of the explanation and amendments herein, none of Peterson's compounds is a methoxysalicylaldehyde. Peterson accordingly does not anticipate either Applicants composition or method claims since this element is missing from the reference.

Claims 1,3, 7, 12, 22 and 24 stand rejected as anticipated by Blank, US 5,789,396. Blank does not disclose a composition comprising, or a method employing, a methoxysalicylaldehyde, as required by Applicants claims. As explained above by Applicants, Blank's salicylic acid is not a methoxysalicylaldehyde, and is hence outside the scope of Applicants' composition claims. For this reason alone, Blank can not anticipate as it does not disclose all elements of Applicants' claims. Further, Blank has nothing to do with methods of protecting proteins from ionizing radiation, it being noted that UV light is not "ionizing" and that UV light is clearly outside Applicants' definition of ionizing radiation. Clearly, Blank lacks the elements of, and hence cannot anticipate, Applicants' method claims.

Claim 24 has been canceled, and the rejection has accordingly been obviated with respect to that claim.

In view of the amendments, traversal and comments presented above, it is respectfully requested that all anticipation rejections under 35 U.S.C. §102(b) be withdrawn.

Claims 5 and 17 stand rejected as being obvious over Blank under 35 USC 103(a). The rejection is traversed on the basis that Blank does not suggest the use of a

methoxysalicylaldehyde in his application. In order for an obviousness rejection to lie, the prior art must in some way supply a suggestion to do that which Applicant has invented, and must also provide a reasonable expectation of success. American Hospital supply Corp. v. Travenol Laboratories, Inc., 223 USPQ 577, 582 (Fed. Cir. 1984). The Federal Circuit has explained the proper test:

> The consistent criterion for determination of obviousness is whether the prior art would have suggested to one of ordinary skill in the art that this process should be carried out and would have a reasonable likelihood of success, viewed in light of the prior art. Both the suggestion and the expectation of success must be founded in the prior art, not in the applicant's disclosure (emphasis added).

In re Dow Chemical Co., 5 USPQ.2d 1529, 1531 (Fed. Cir. 1988); Amgen, Inc. V. Chugai Pharmaceutical Co. Ltd. 18 USPQ.2d 1016. 1022-23 (Fed. Cir.), cert. denied, 502 U.S. 856 (1991). Blank, however, does neither. There is no disclosure or even a remote hint in Blank that a methoxysalicylaldehyde could be used in his invention, no mention of any expectation of success, and no suggestion of the capability for protecting against ionizing radiation. Clearly, one of ordinary skill in the art seeking compositions and methods like those of Applicants would dismiss Blank out of hand as irrelevant. Blank's compositions are simply different from Applicants, as is his purpose (regulating wrinkles and/or skin atrophy), and Blank clearly does not suggest any modification that would otherwise render Applicants obvious.

In view of the foregoing comments and amendments, this case is believed to be in condition for allowance, and a Notice of Allowance is courteously solicited.

Respectfully submitted,

Date: March 17, 2003

James T. Jones
Agent for Applicant(s)
Reg. No. 30,561

Pfizer Inc.
Patent Department, MS 8260-1611
Eastern Point Road
Groton, Connecticut 06340
(860) 441-4903

VERSION MARKED UP TO SHOW CHANGES MADE

1. (Once Amended) A method of protecting a solid-state protein from ionizing radiation which comprises combining said protein with a radiation-protecting amount of a methoxysalicylaldehyde ~~derivative~~ prior to exposing said protein to said ionizing radiation.

2. (Once Amended) A method according to claim 1 wherein said methoxysalicylaldehyde ~~derivative~~ is 3-methoxysalicylaldehyde.

3. (Once Amended) A method of protecting a solid-state protein from ionizing radiation which comprises combining said protein with radiation-protecting amounts of a methoxysalicylaldehyde ~~derivative~~ and 6-hydroxy-2,5,7,8-tetramethylchroman-2-carboxylic acid prior to exposing said protein to said ionizing radiation.

4. (Once Amended) A method according to claim 3 wherein said methoxysalicylaldehyde ~~derivative~~ is 3-methoxysalicylaldehyde.

5. (Once Amended) A method of protecting a solid-state protein from ionizing radiation which comprises combining said protein with radiation-protecting amounts of a methoxysalicylaldehyde ~~derivative~~ and isopropanol prior to exposing said protein to said ionizing radiation.

6. (Once Amended) A method according to claim 5 wherein said methoxysalicylaldehyde ~~derivative~~ is 3-methoxysalicylaldehyde.

7. (Once Amended) A formulation comprising a solid-state protein and a methoxysalicylaldehyde ~~derivative~~.

9. (Once Amended) A formulation according to claim 7 wherein said methoxysalicylaldehyde ~~derivative~~ is 3-methoxysalicylaldehyde.

10. (Once Amended) A formulation according to claim 7 wherein said methoxysalicylaldehyde ~~derivative~~ comprises at least about 0.1% by weight of said formulation.

11. (Once Amended) A formulation according to claim 10 wherein said

methoxysalicylaldehyde ~~derivative~~ comprises from about 2.9% to about 8.0% by weight of said formulation.

12. (Once Amended) A formulation comprising a solid-state protein, a methoxysalicylaldehyde ~~derivative~~, and 6-hydroxy-2,5,7,8-tetramethylchroman-2-carboxylic acid.

14. (Once Amended) A formulation according to claim 12 wherein said methoxysalicylaldehyde ~~derivative~~ is 3-methoxysalicylaldehyde.

15. (Once Amended) A formulation according to claim 12 wherein said methoxysalicylaldehyde ~~derivative~~ comprises at least about 0.1% by weight of said formulation, and said 6-hydroxy-2,5,7,8-tetramethylchroman-2-carboxylic acid comprises at least about 0.1% by weight of said formulation.

16. (Once Amended) A formulation according to claim 15 wherein said methoxysalicylaldehyde ~~derivative~~ comprises from about 2.9% to about 8.0% by weight of said formulation, and said 6-hydroxy-2,5,7,8-tetramethylchroman-2-carboxylic acid comprises from about 0.1% to about 1.0% by weight of said formulation.

17. (Once Amended) A formulation comprising a solid-state protein, a methoxysalicylaldehyde ~~derivative~~, and isopropanol.

19. (Once Amended) A formulation according to claim 17 wherein said methoxysalicylaldehyde ~~derivative~~ is 3-methoxysalicylaldehyde.

20. (Once Amended) A formulation according to claim 17 wherein said methoxysalicylaldehyde ~~derivative~~ comprises at least about 0.1% by weight of said formulation, and said isopropanol comprises at least about 0.1% of said formulation.

21. (Once Amended) A formulation according to claim 17 wherein said methoxysalicylaldehyde ~~derivative~~ comprises from about 2.9% to about 8.0% by weight of said formulation, and said isopropanol acid comprises from about 0.1% to about 4.0% of said formulation.

22. (Once Amended) A composition comprising a methoxysalicylaldehyde ~~derivative~~ and 6-hydroxy-2,5,7,8-tetramethylchroman-2-carboxylic acid.

23. (Once Amended) A composition according to claim 22 wherein said methoxysalicylaldehyde ~~derivative~~ is 3-methoxysalicylaldehyde.

Claim 24 has been canceled.